

# Receiver 2000 series

## Professional Digital Decoder

### User Manual



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### 1. Overview

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Maximum Receiver 2000 series is a professional digital decoder with CI interfaces, which can receive digital satellite or digital terrestrial TV signals.

Maximum CI 2010 S is the satellite receiver;

Maximum CI 2011 T is the terrestrial receiver;

#### 1.1 Main Features

- Fully compliant with MPEG-2 and DVB standards
- Support multiple CA systems, such as Irdeto, Viaccess, etc.
- Support multi-descramble functions, depending on the CI module
- Can descramble multiple programs and streams with 2 slots of PCMCIA Modules
- Support ASI input. The un-decrypted programs could be further decrypted via loop-through
- Support professional interfaces for analog video/audio output
- User-friendly OSD and easy-to-use menu system
- Possible to program various satellite & transponder information
- Can search for the newly added transponders/networks automatically
- Can store 2000 channels maximum
- Can receive SCPC/MCPC from C/Ku band satellites
- Supports VBI Teletext function
- Supports Antenna Positioning Help feature (NOTE! Is only available on DCH-3000P-XXS)
- Automatic PAL/NTSC conversion
- Automatic last channel saving
- Supports OSD menu

#### 1.2 For Your Safety

- Keep enough space around the receiver in order to have sufficient ventilation
- Only use a clean, soft cloth and neutral detergent to clean the surface of the receiver
- Do not connect or modify cables when the receiver is connected to the power source
- Do not remove the cabinet of the receiver
- Do not expose the receiver for extreme hot, cold or wet environments

### 1.3 Checking List

Please control that the following items are included in the box:

- |                           |       |
|---------------------------|-------|
| • User manual             | 1 pcs |
| • Maximum Receiver        | 1 pcs |
| • Three-cores Power cable | 1 pcs |
| • Three-cores AV cable    | 1 pcs |
| • ASI cable               | 1 pcs |
| • XLR connector           | 2 pcs |

## 2. Specifications

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### 2.1 Maximum CI 2010 S

#### QPSK demodulation & FEC parameter

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Input Frequency Range	950 MHz ~ 2150 MHz
Input Level	-65 dBm ~ -25 dBm
Input Impedance	75 $\Omega$
Input Connector	F-type
Input Frequency band	Ku and C band
Symbol Rate	2 MB~45 MB (SPTS or MPTS)
FEC	+1/2, 2/3, 3/4, 5/6, 6/7 and 7/8
Reeds Salomon Decoding	204, 188, T = 8

#### LNB Control

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Polarization Voltage	13V / 18V
High/Low band control	0/22K Switch

#### Front panel

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Common Interface	PCMCIA Module slot, fully support Irdeto, Viaccess, NDS etc.
LED Display	Shows current receiving channel number
8 buttons	UP, DOWN, LEFT, RIGHT, OK, MENU, ESC, and SHIFT
Indicator Light Display	1 Power Indicator, 1 Satellite Signal Locking (LOCK) and 1 Indicator of the second function of keys A6~A9

## Maximum 2010S/2011T Receiver

### ASI Input

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Interface	75 $\Omega$ , BNC connector
Data Mode	Byte/Burst Adaptive
Packet Length	188/204 Adaptive

### ASI Output

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Interface	75 $\Omega$ , BNC connector
Data Transmission Rate	270 Mb/s
Data Mode	Byte
Packet Length	188/Bypass
Signal Level	800mV $\pm$ 10%

### Various

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Power supply	AC 90V~260V 50Hz/60Hz
Net weight	5 kg
Dimensions	44mm $\times$ 255mm $\times$ 483mm
Operation Temperature	0-40 $^{\circ}$ C
Storage Temperature	-20~70 $^{\circ}$ C

## 2.2 Maximum CI 2011 T

### DVB-T demodulation & FEC parameter

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Input Frequency Range	VHF: 174 MHz ~ 230 MHz UHF: 470 MHz ~ 862 MHz
Input Level	-91dBm ~ -20dBm
Input Impedance	75 $\Omega$
Input Connector	RF FEMALE
Symbol Rate	2 MB~45 MB (SPTS or MPTS)
OFDM Spectrum	2k and 8k
Constellation	QPSK, 16QAM, 64QAM
Guard Interval mode	1/32, 1/16, 1/8 and 1/4
FEC	1/2, 2/3, 3/4, 5/6, 6/7 and 7/8

### ASI Input

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Interface	75 $\Omega$ , BNC connector
Data Mode	Byte / Burst
Packet Length	188 / 204 Adaptive
Signal level	800mV $\pm$ 10%

## Maximum 2010S/2011T Receiver

### ASI Output

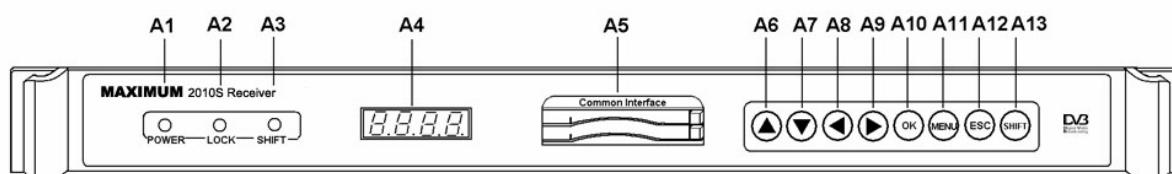
Interface	75 $\Omega$ , BNC connector
Data Transmission Rate	270 Mb/s
Data Mode	Byte
Packet Length	188 / Bypass
Signal Level	800mV $\pm$ 10%

### Various

Power supply	AC 90V~260V 50Hz/60Hz
Net weight	5 kg
Dimensions	44mm $\times$ 255mm $\times$ 483mm
Operation Temperature	0-40 $^{\circ}$ C
Storage Temperature	-20~70 $^{\circ}$ C

## 3. Installation and Operation

### 3.1 Front panel



A1	POWER	Power indicator.
A2	LOCK	Satellite signal indicator. It is on when the satellite signal is received or an ASI signal is locked.
A3	SHIFT	Shift indicator. When the shift indicator it is on, the keys, A6~A9, will have another function. <i>(Please see the table under "A6~A9" on next page).</i>
A4	LED	Display the current channel number and information. When IRD starts, it displays: <span style="border: 1px solid black; padding: 2px;">boot</span> & <span style="border: 1px solid black; padding: 2px;">---</span> In general, the LED displays the channel number from 0 ~ 2000. When you adjust the volume, it will display from 0 ~ 17. If you check the channel information, the LED will display the BER value from 0.00 – 10.00.
A5	Common Interface	2 PCMCIA Module slots
A6~A9	▲ ▼ ◀ ▶	These keys are used to set or select the parameters of a chosen function. It will have different functions in different

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work modes. Please refer to the table below for detailed definitions of A6~A9:

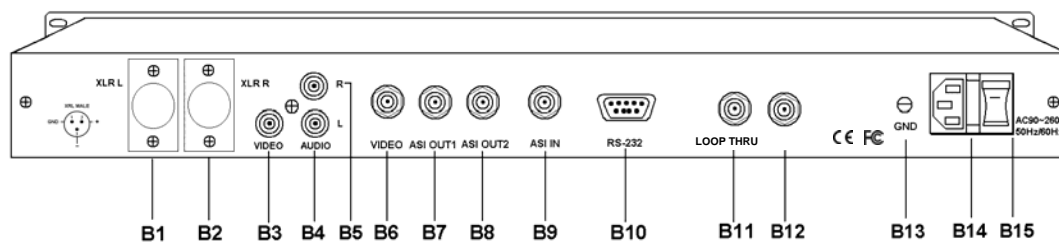
Key	Viewing mode		Menu mode
	SHIFT is off	SHIFT is on	
▲/Up	Change back to the previous channel	Select audio language	Cursor moves up
▼/Down	Change to the next channel	Select audio channel	Cursor moves down
◀/Left	Decrease the volume	Display channel information	Modify the parameter/ Cursor moves left
▶/Right	Increase the volume	TV/Radio switch	Modify the parameter/ Cursor moves right

A10	OK	Confirmation Key. Is used to enter a submenu or confirm the chosen operation.
A11	MENU	Menu key. Is used to display menus and command boxes.
A12	ESC	Exit key. Is used to return to the previous level in the menus or exit a menu.
A13	SHIFT	Second function key. Press the SHIFT key for 2 seconds, and the SHIFT indicator will turn on. The keys, A6~A9, will then be on second function mode. <i>Please refer to the table above.</i>

When SHIFT is turned on, the IRD can be operated through the remote control.

**Note:** Remote control is an optional item.

### 3.2 Rear panel



B1	XLR L	XLR interface, left audio channel balance output
B2	XLR R	XLR interface, right audio channel balance output
B3	VIDEO	RCA interface, AV video output
B4	AUDIO L	RCA interface, left audio channel output

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B5	AUDIO R	RCA interface, right audio channel output
B6	VIDEO	BNC interface, multiplex video output
B7	ASI OUT1	ASI output interface
B8	ASI OUT2	ASI output interface
B9	ASI IN	ASI input interface
B10	RS-232	Data interface. Used for upgrading software.
B11	LOOP THRU	Satellite signal input interface
B12	TUNER IN	Satellite signal output interface, which provides satellite signal for next IRD
B13	GND	Connect to ground
B14	FUSE	Fuse, which is installed in the power socket
B15	AC90~260V 50Hz/60Hz	AC power socket

### 3.3 Installation

Maximum Receiver 2000 series is installed in a 19" rack, and there are three kinds of typical applications of Maximum Receiver 2000 series.

#### 3.3.1 Maximum CI 2010 S

--1. Take the Maximum CI 2010 S as the signal resource for Multiplexer. The Maximum CI 2010 S can demodulate the QPSK signal from satellite into ASI baseband transport stream. Then it transmits the signal to a DVB MPEG-2 multiplexer, which can filter or refresh the PIDs of the selected programs, and rebuild the EPG, SI and other necessary tables.

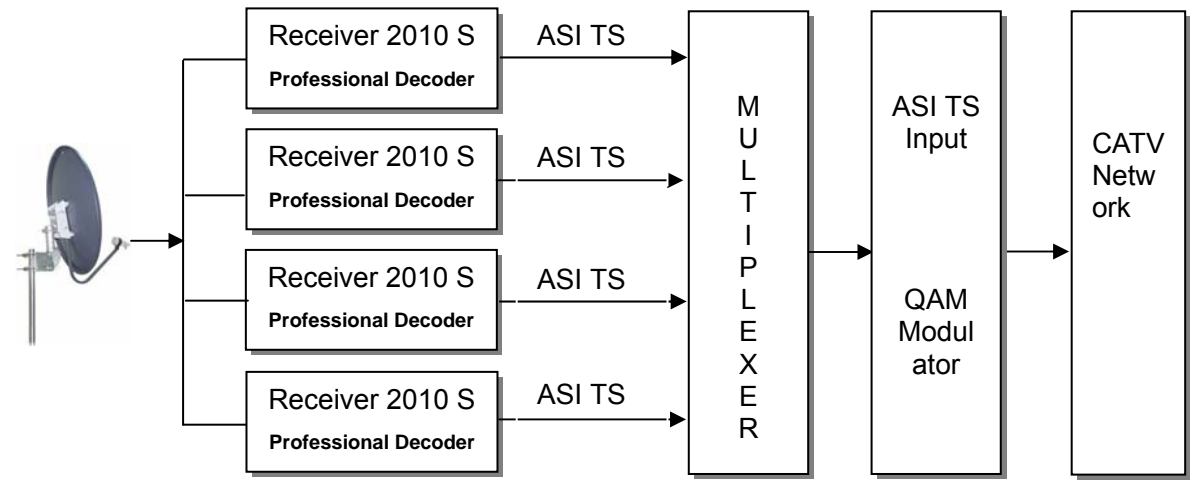
--2. Use the Maximum CI 2010 S to demodulate the QPSK satellite signal into ASI baseband transport stream, and then transmit it to the QAM modulator. The QAM modulator will then send the QAM signal to the CATV network.

--3. Take the Maximum CI 2010 S as the signal source for media players or encoders. Use Maximum CI 2010 S to demodulate the QPSK satellite signal into ASI baseband transport stream, and then transmit it to a DVB-IP gateway.

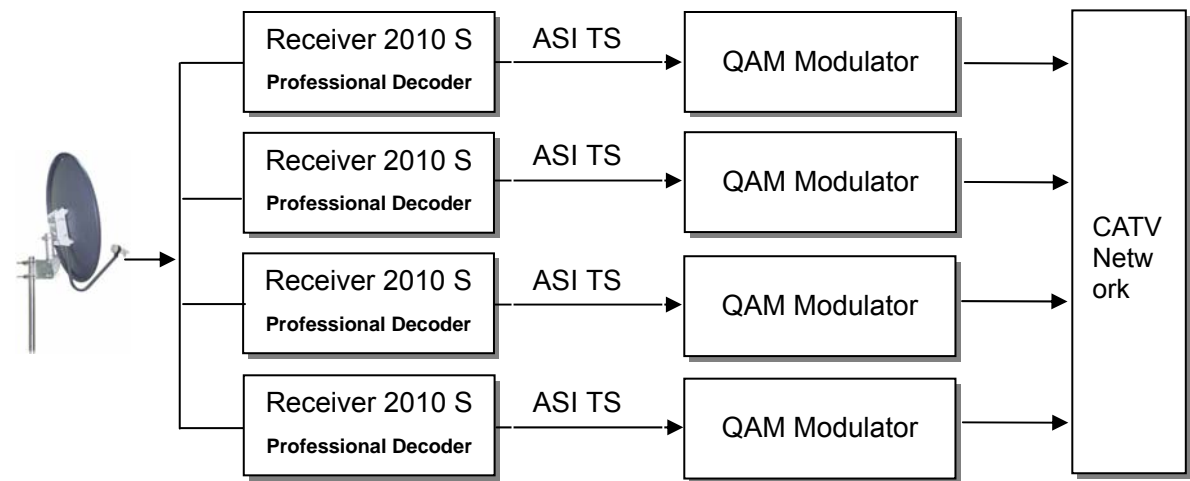
The Maximum CI 2010 S could demodulate the satellite signal into ASI baseband transport stream. It is a useful device for technicians who wish to monitor or analyze the TS stream.

Maximum 2010S/2011T Receiver

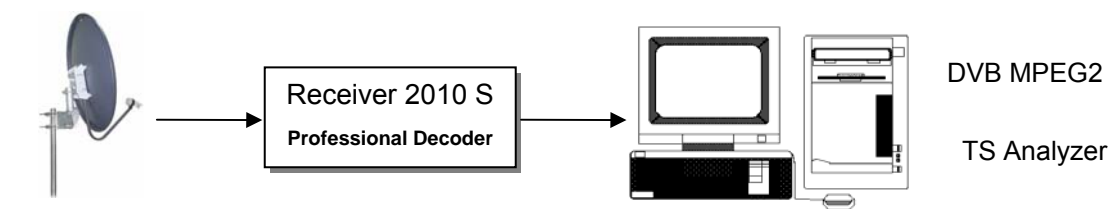
Connect to Multiplexer



Connect to QAM Modulator



Connect to TS Generator



## Maximum 2010S/2011T Receiver

### 3.3.2 Maximum CI 2011 T

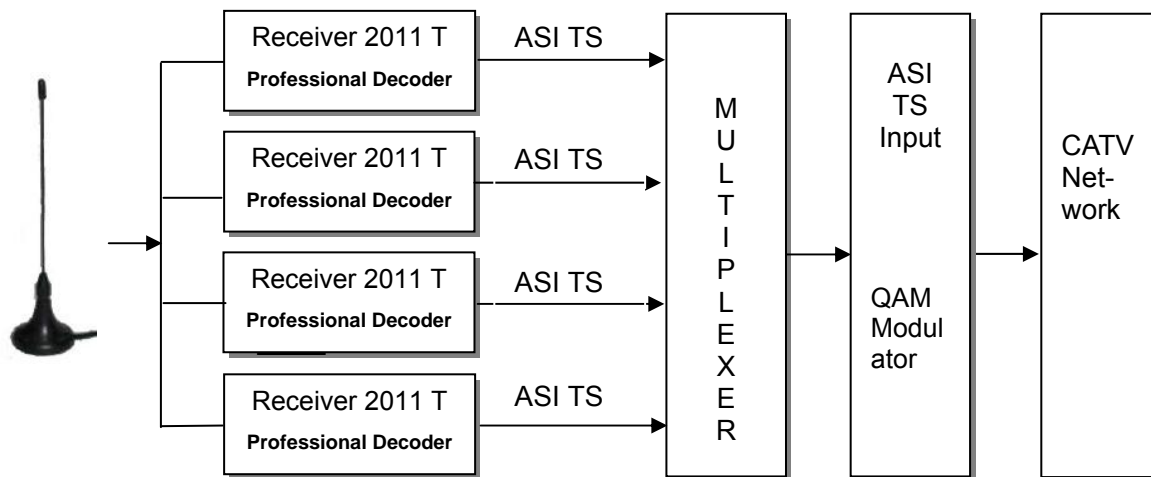
--1. Take the Maximum CI 2011 T as the signal resource for Multiplexer. The Maximum CI 2011 T can demodulate the antenna signal into an ASI baseband transport stream. Subsequently it transmits the stream to a DVB MPEG-2 multiplexer, which can filter or refresh the PIDs of the selected programs, and rebuild the EPG, SI and other necessary tables.

--2. Use the Maximum CI 2011 T to demodulate the antenna signal into an ASI baseband transport stream, and then transmit it to the QAM modulator. The QAM modulator will then send the QAM signal to a CATV network.

--3. Take the Maximum CI 2011 T as the signal source for media players or encoders. Use Maximum CI 2010 S to demodulate the antenna signal into an ASI baseband transport stream, and then transmit it to a DVB-IP gateway.

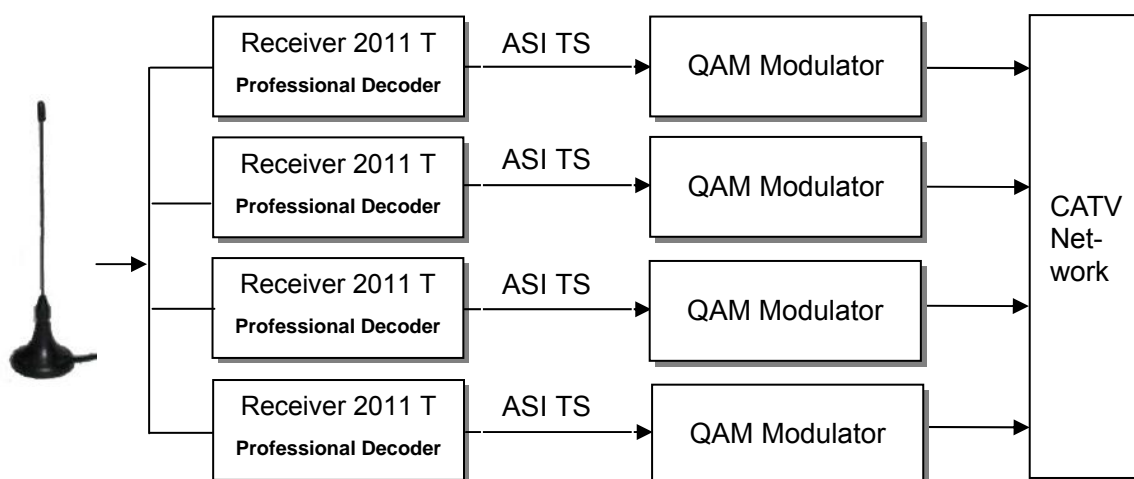
The Maximum CI 2011 T could demodulate the satellite signal into an ASI baseband transport stream. It is a useful device for technicians who wish to monitor or analyze the TS stream.

Connect to Multiplexer

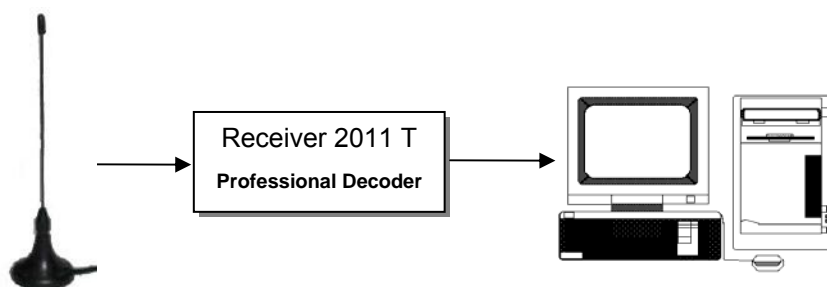


## Maximum 2010S/2011T Receiver

Connect to QAM Modulator



Connect to TS Generator



## 4. General Functions

The following describes the basic functions of the Maximum Receiver 2000 series when it is used for watching satellite TV programs or listening to broadcasts.

### 4.1 Channel Selection

To select channels, use the ▲▼ keys on the front panel.

Besides the normal function, a more convenient function is also possible:

While watching, press the OK key. A channel list will be displayed on the right side of the screen. Press the ▲▼ keys to choose the desired channel, and press the OK key to confirm. Press the ESC key to exit the channel list.



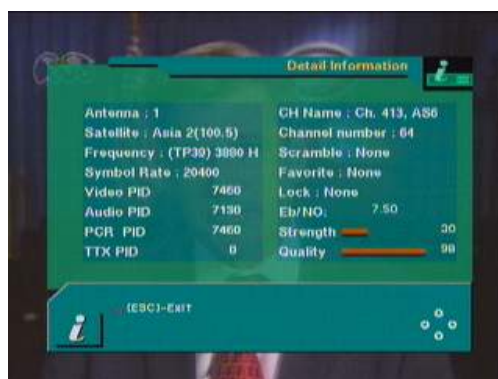
## Maximum 2010S/2011T Receiver

### 4.2 Channel Information

The channel information will be shown when you change to a new channel. The information will automatically disappear after 6 seconds.

If you wish to see more detailed information about a channel, press the ◀ key while watching a channel or while the Shift indicator (Yellow) is on. Press the ESC key to exit the channel information window.

**Note:** When you press the ▶ key for 2 seconds, the SHIFT indicator change between "ON" or "OFF".



### 4.3 Volume Control

When the SHIFT indicator is off, press the ◀▶ keys of the front panel to adjust the volume.

**Note:** The IRD have 18 volume grades. When you adjust the volume, the LED on the front panel will display volume values from 0 to 17.



### 4.4 Audio Control

When the SHIFT indicator is off, press the ▲ key to change the audio language; press the ▼ key to change audio channel. A brief information will be shown on the screen for about 6 seconds.

### 4.5 TV/Radio switching

When the SHIFT indicator is on, press the ▶ key to switch between TV mode and Broadcasting mode.

**Note:** When you press the ▶ key for 2 seconds, the SHIFT indicator change between "ON" or "OFF".

## 5. Menu Information

Turn on the receiver after installation and cable connection have been executed. If it is the first time the receiver has been booted, the main menu will be displayed on the screen. If it not is the first time, and the Receiver already has stored programs, the last channel information will be displayed when you turn on the receiver.

Press the MENU key on the front panel to access the main menu.

There are 4 options in the main menu:

- Channel Manager: Edit or delete programs.
- Installation: Set up antenna parameters, search for channels, and resume factory default configuration.
- Option Menu: Set up system parameters, antenna position and view IRD information.
- Common Interface: To check status of common interface and set descrambling mode.

**Note:**

- You can use the ◀▶▲▼ keys to move the cursor left, right, up and down. Press the OK key to confirm and press the ESC key to exit.
- You can use the ◀▶ keys to modify the parameters of an item with the ◀▶ mark. You can also press the OK key to display the list, and then select the correct parameters on the list.
- For items with a ■■■ mark, use the ▶ key to display the numeric keypad. Then press the ▲▼ keys to change the numbers, and use the ◀▶ keys to select the correct number. Press the OK key to make the choice become effective. Then use the ▲▼ keys to select “OK” to make a final confirmation of the modified parameters, or select “Cancel” to cancel the input data.

### 5.1 Channel Manager

There are two submenus in Channel Manager:

- TV Channel
- Radio Channel

*Since the operation for Radio and TV are the same, it is only the operation for TV which is explained in this manual.*



Select 'TV channel' in the Channel Manager menu and press the OK key. On the left side of the TV Channel menu, the channel list will be displayed. On the right side, the current channel will be shown in the Picture in Graphic (PIG) mode (1/9 size of the normal screen size.) The

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channel information will also be displayed under the PIG screen as well.

*When you change channel, the PIG will change accordingly.*

In TV Channel Manager, you can use the Delete Channel command to delete TV channels.

First, use the ▲▼ keys to select the TV channel you wish to delete. Press OK. An “X” mark will appear in front of the channel name. Repeat this procedure for other TV Channels you wish to delete.

If you want to change your choice of marked TV channels, you select the channel and press OK. The “X”-mark will then disappear.

After the selection, press the ESC key to delete all the marked channels. The message “Are you sure to delete marked channels?” will pop up. Select “OK” or “Cancel” in the message box and then press the OK key to confirm the choice. Press ESC to exit the channel manager, the message “Saving data...” will be displayed.



### Note:

- The deleted channel cannot be recovered unless you make a Channel Search again.
- Do not turn off the receiver when the message “Saving data...” is displayed, as that can result in all data not will be saved.

## 5.2 User Installation

### 5.2.1 Maximum CI 2010 S

#### Antenna Setup

1. Antenna: Each antenna corresponds with a satellite.
2. Satellite: The name of the satellite which corresponds with the antenna.
3. LNB Type: Select one of the three following LNB types:
  - Normal: Single Polarization LNB
  - Univ: Dual-pol. (Universal) LNB
  - LNB: Dual-pol. C-band LNB



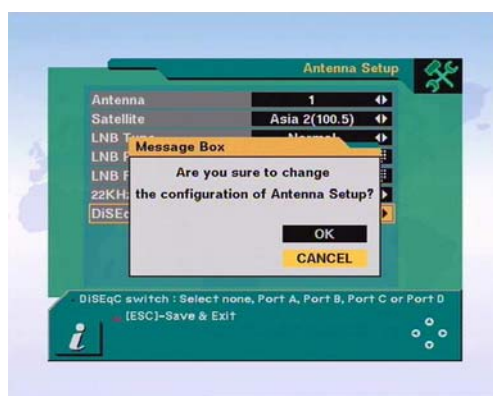
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4. **LNB Freq.:** when you change LNB type, the frequency of the LNB will change accordingly. You can type in the frequency by using the numeric keys. The Receiver 2000 series supports two LNB local oscillators. If a channel cannot be found with first local frequency, it will automatically search for the channel with the second local frequency.



Switches ( 22KHz, DiSEqC ) : you can select the switches you want to configure the antenna with.

Press ESC to finish the antenna setting. The message "Are you sure to change the configuration of Antenna Setup?" will be displayed. Select OK and press the OK key to confirm, and wait for the update data to be saved.

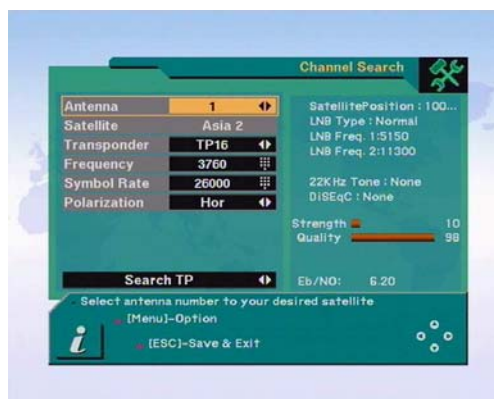


### Channel Search

1. **Antenna** : Select the number of the antenna corresponding to the expected satellite.

**Note:** On the right side of the screen, it is the corresponding parameters of the selected satellite. If it is not correct, you can modify the parameters in Antenna Setting.

2. **Transponder**: Use the ◀▶ keys to select the expected TP. Otherwise move to the new TP item, where you can edit the parameters of the chosen TP.





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3. Frequency & Symbol Rate: Edit the frequency and symbol rate. If the pre-set program cannot meet the requirements, you can set up the satellite parameters manually.
4. Polarization: Select H or V.
5. Search: After setting up the satellite parameters, you can press the ◀▶ keys to select search options:

- Search SAT: Search for all presented channels from the selected satellite.
- Search TP: Search all channels for one TP, which has been selected from the TP item.
- Search Network: Search channels for the network related to the TP selected. You can use this to search for new satellite channels.

**How to search :** After setting up the parameters, you should move the cursor to the search column. Choose the desired search option, and press OK to start the search.

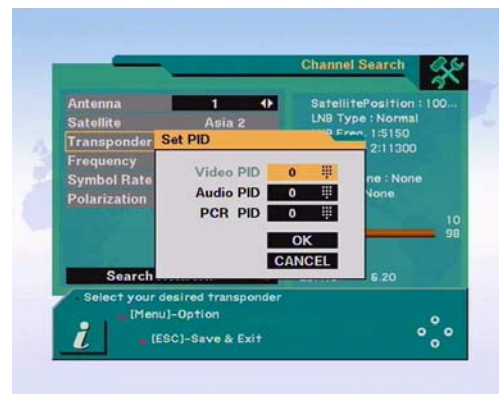
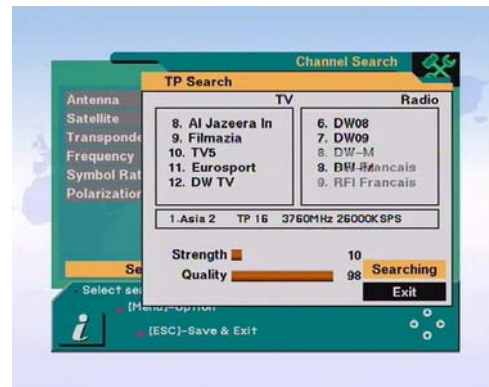
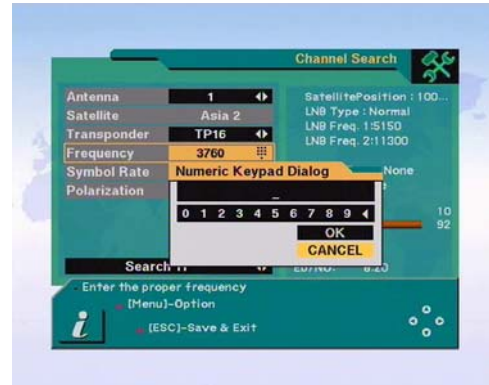
During the search, you can see the list of channels which have been searched out in the Searched List Box on the screen. When the channel search is completed, you can choose with the cursor if you wish to "VIEW" or to "EXIT".

6. In Channel Search, press the Menu key, and this submenu will be displayed:

- Set PID
- Delete TP
- Search Options

- (1) Set PID: You can set the PID (Packet Identifier) manually with the "Set PID" command.

Move to the Transponder item and press the Menu key to display the Command box. Select the "Set PID" command and press OK. The menu "Set PID" will then

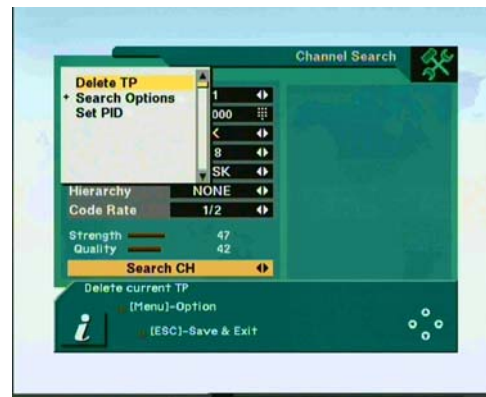
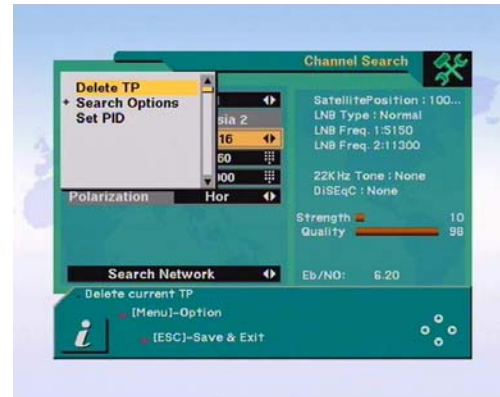


## Maximum 2010S/2011T Receiver

be displayed and you can type in the correct data and press OK to confirm it.

If the Set PID operation is successful, you can see a new program named "PID-XXXX" in the channel list. "XXXX" means Video PID.

- (2) Delete TP: Move to the Transponder you wish to delete and press the Menu Key to display the Command Box. Select the "Delete TP" Command. The message "Are you sure to delete this TP?" will be displayed. Select "OK" and press the OK key to confirm.
- (3) Search Options: Provides a convenient option to search for channels. You can choose between "only search FTA channels" or "All channels".



### 5.2.2 Maximum CI 2011 T

#### Channel Search

1. Channel: Channel number
2. Frequency: Frequency.
3. OFDM Spectrum: 2k or 8k carrier
4. Guard Interval: 1/32, 1/16, 1/8, 1/4
5. Constellation: QPSK, 16QAM, 64QAM
6. Hierarchi: NONE, 1, 2, 4 optional
7. FEC: 1/2, 2/3, 3/4, 5/6, 6/7 or 7/8

After setting up the parameters, you can press the ◀▶ keys to select search option:

- Search CH: Search for programs on the selected channel.
- Search Network : Search for channels from the network related to the selected TP. You can use this function to search for new terrestrial channels.



## Maximum 2010S/2011T Receiver

**How to search:** After setting up the parameters, move the cursor to the search column. Choose the desired search option and press OK to start the search.

During the search, you can see the list of channels which have been searched out in the Searched List Box on the screen. When the channel search is completed, you can select with the cursor if you wish to “VIEW” or to “EXIT”.



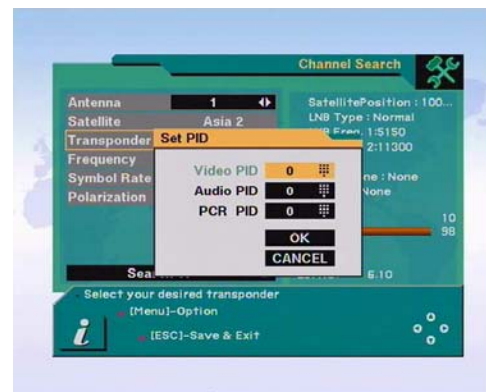
8. In Channel Search, press the Menu key, and the following submenus will be shown:

- Set PID
- Delete TP
- Search Options

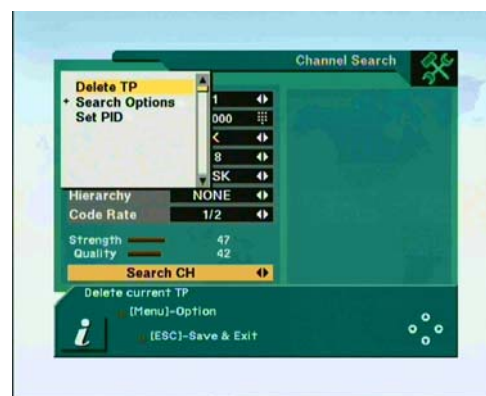
(1) Set PID: You can set the PID (Packet Identifier) manually with the “Set PID” command.

Move to the Transponder item and press the Menu key to display the Command box. Select the “Set PID” command and press OK. The menu “Set PID” will then be displayed and you can type in the correct data and press OK to confirm it.

If the Set PID operation is successful, you can see a new program named “PID-XXXX” in the channel list. “XXXX” means Video PID.



(2) Delete TP: Move to the Transponder you wish to delete and press the Menu Key to display the Command Box. Select the “Delete TP” Command. The message “Are you sure to delete this TP?” will be displayed. Select “OK” and press the OK key to confirm.



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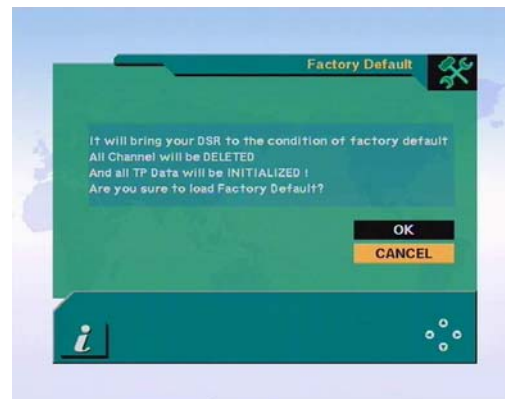
- (3) Search Options: Provides a convenient option to search for channels. You can choose between “only search FTA channels” or “All channels”.

### 5.2.3 Factory Default

If you wish to resume the factory default configuration, you should select “Factory Default” and press the OK key.

A warning message will be displayed. If you are sure you wish to resume, select OK and press the OK key.

**Note:** Once resuming the factory default setting, it will lose all data and information which previously has been installed.



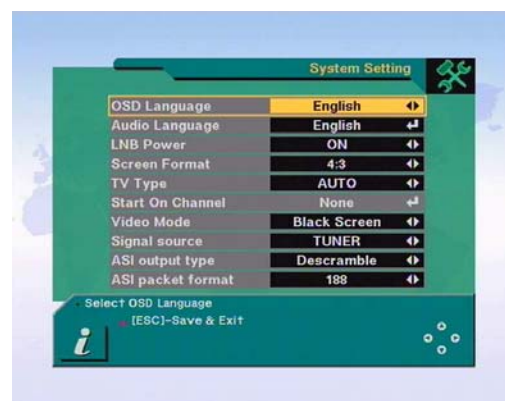
### 5.3 Option Menu

There are 3 submenus in the Option Menu:

- System Setting
- Antenna Direction Help
- Receiver Information

#### 5.3.1 System Setting

1. OSD Language: You can choose between “Chinese” and “English”.
2. Audio Language: Set up a priority list for the audio language. The first mentioned audio language on the priority list will be shown if the concerned language is supported by the channel. If that is not the case the next audio language on the list will be shown.





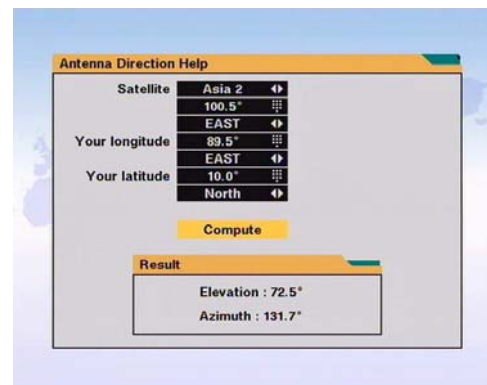
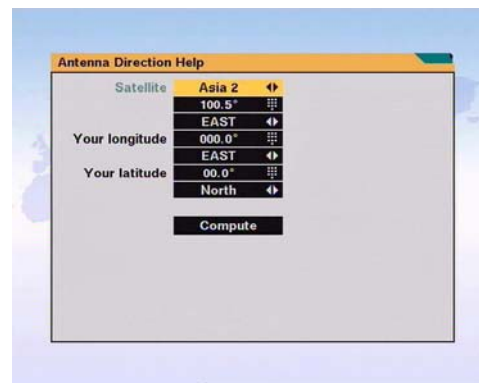
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3. LNB power: Choose between LNB power "ON" or "OFF".
4. TV Type: Select the type according to TV systems: PAL/NTSC/PAL & NTSC.
5. Start On Channel: Press OK , the message "Activate Start On Channel?" will be displayed, Select "OK" and press the OK key. The channel list will be displayed. You can select one channel from the list. The selected channel will start whenever you turn on the IRD. If you do not choose a Start On Channel, it will automatically show the last viewed channel.
6. Signal Source: Select on of the two signal sources: TUNER or ASI.
7. ASI Output type: To output clear transport stream or scrambled transport stream.
8. ASI Packet format: Set the ASI stream data format. You can choose between "188" or "Bypass" (The Receiver will not transfer the original data package format).

### 5.3.2 Antenna Direction Help

This menu provides the antenna direction help function. You can get correct information to direct the antenna towards a satellite.

1. Select the desired satellite name, and the location information of the selected satellite will be displayed. If the location of the satellite is changed, you can re-set the new location.
2. Input the value of the local longitude and latitude. Move the cursor to "Calculate" and press OK. The correct information of the satellite will be displayed.

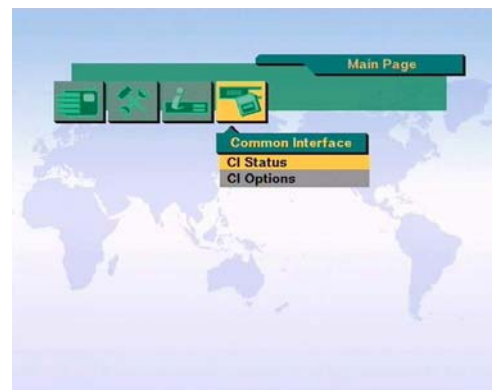


### 5.3.3 Receiver Information

Display the software version, hardware version and copyright information for the Receiver.

### 5.4 Common Interface

There are 2 CI slots in the Receiver. You can select the suitable CI module and Smart Card corresponding to the scrambled program.



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**Note:** Please pay attention to the interface direction of the CI Module and Smart Card. It should be inserted to a slot with correct direction and not be plugged into the slot arbitrarily.

### 5.4.1 CI status

Used for checking the CI Module information.

If the CI Module is inserted to CI slot, the corresponding slot column will display the CI Module name.

Select the slot expected to be checked and press OK. The related information will be displayed.

If there is no information about the Smart Card, it will display “No Card”. The smart card should then be inserted again.



### 5.4.2 CI Options

Multi-channel descrambling Option depends on the CI module : Only the professional CI Module can support the multi-channel descrambling function.

When using this function, you can descramble multiple scrambled programs in a stream with ASI output. 2 or more programs in the stream are decrypted.

- Single Channel: it could only decrypt one channel in the multi-program-stream with general CI Module.
- Multiple Channels: it is only available when the professional CI Module supports multi-descrambling function and the Smart Card has multi-program authorization. Then 2 or more programs in the stream are decrypted.

**Note:** Please refer to 6.2 CI multiple channel descrambling.

*Slot1 Designation Channel:* if the Slot1 has not been designated to one channel, the CI Module of Slot1 will descramble the current viewing channel; If it has been designated to a channel, the CI Module of Slot1 will only descramble the designated channel.

*Slot2 Designation Channel:* similar to Slot1 Designation Channel.



## 6. ASI Input / Output and CI Descramble Function

### 6.1 ASI output and descramble / scramble setting

- When viewing the Free-to-Air satellite program, the ASI stream of this program will be outputted at the same time. It could be taken as signal resource when it is connected to a QAM Modulator or a Multiplexer.
- In order to watch the scrambled programs, you need to insert the corresponding CI Module and CA Smart Card to descramble this program. The transport stream including the descrambled program could be outputted at the same time.

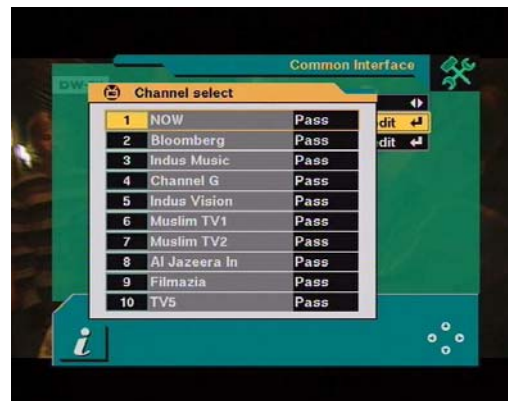
You can choose the output stream as descrambled or scrambled. Enter the system setting menu, and set the ASI output to Descrambled or Scrambled. (*Please refer to paragraph 5.3.1 system setting*).

### 6.2 CI Multi-channel Descrambling

There are 2 methods to descramble multi-channel to output the transport stream with multi-channel descrambled.

Method 1:

1. Insert a professional CI Module that supports multi-channel descrambling function and a CA smart card with multiple CA authorization.
2. Enter the system setting menu, set the ASI output to "Descramble" ( *Please refer to paragraph 5.3.1 System Setting* ).
3. Set the descramble option to the item "Multi Channel", and set the designation channel of Slot1 and Slot2 to "None". (*Please refer to 5.4.2 Descramble option.*)
4. Exit the Main Menu and go back to view mode. Press the OK key to select the channel expected to be descrambled and wait for a while. The selected channel will be played. Then select other channels expected to be descrambled, so the IRD could output the stream of multiple descrambled channels



**Note:**

1. As the quantity of multi-channels to be descrambled of each CI module is different, the quantity of the synchronously descrambled channels depends on the CI Module.
2. The Multiple Channels must be transmitted from the same transponder.

Method 2:

1. Insert CI Modules and Smart Cards in both Slot1 and Slot2.
2. Enter the System Setting menu and set the ASI output to "Descramble". (*Please refer to paragraph 5.3.1 System Setting*).
3. Set the Descramble option to "Single Channel", and set the designation channel of Slot1 and Slot2 to be the channel expected to be descrambled. (*Please refer to paragraph 5.4.2 Descramble Option*).
4. Exit the Main Menu and go back to 'View mode'. Press the OK key to select the channel expected to be descrambled, and wait for a while. The selected channel will be played. Then select other channels expected to be descrambled. Thus, it could output the stream with the designated channels which are descrambled.

**Note:** The Multiple Channels must come from the same transponder.

### 6.3 ASI Input function

It provides input interface as the ASI input port. It could descramble the scrambled ASI stream, and output ASI stream and AV video signal.

- It can receive ASI streams directly from various stream output equipments.
- If connecting the ASI OUT and ASI IN interfaces of two or more IRDs serially, the multiple ASI streams could be multiplexed to save the re-multiplexing resource.

Method: Enter the System Setting menu, and set the signal resource to ASI. (*Please refer to paragraph 5.3.1 System Setting*).

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